

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: 19 OCT 1983

SUBJECT: Report on Multimedia Problems at Major Federal Facilities in Region 6  
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SUPERFUND BRANCH

This is the third of my FY 1983 periodic reports on multimedia problems at Major Federal Facilities in Region 6. These reports are called for in one of my FY 1983 Performance Standards.

Attachment

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Pine Bluff Arsenal  
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MAJOR FEDERAL FACILITIES OUT OF COMPLIANCE

OR HAVING POTENTIAL HAZARDOUS WASTE

DISPOSAL PROBLEMS

REGION 6

This report was prepared to provide a brief summary of what are considered to be the most significant compliance problems at major Federal facilities in Region 6. The problems described are multi-media in that they include actual or potential problems in each of the three environmental media of AIR (SIP compliance), WATER (NPDES compliance) and HAZARDOUS WASTE (RCRA/CERCLA compliance). Individual facilities are listed in an approximate order of priority determined by the apparent magnitude of the facility's total contribution to pollution of the local environment, and the order was subject to the judgment of the writer as to relative magnitude between media.

1. KELLY AIR FORCE BASE, TEXAS

Problem Media - Water and Hazardous Waste

a. Water Problems - KAFB continues to have problems consistently complying with NPDES permit limits on a number of the control parameters including phenols, BOD, COD, mercury, nickel and cadmium. The primary reason for the current problems appears to be the antiquated and inadequate treatment facilities currently being used. Some changes have been made in the management and control of waste discharges from Base production areas into the IWTP, and the changes have reduced the number and magnitude of some of the violations. However, waste loads being sent to the plant are still beyond its capacity to treat properly. KAFB currently has plans underway to upgrade the treatment plant to provide equivalent BAT treatment as reflected in a renewal permit proposed for issue in the near future. The IWTP improvements are scheduled to become operable early in 1986.

No action has been taken yet by the State of Texas to litigate the 1981 Leon Creek fish kill incident which was linked to KAFB chemical drum washing activities.

b. Hazardous Waste Problem - During an August 1980 visit to KAFB, EPA called attention to three inactive industrial waste disposal sites adjacent to Leon Creek, which had high potential for contaminant migration into the Creek or the ground water. We requested the Air Force to investigate these sites further and report on their findings. In August 1982, we received an Air Force report which indicates these sites are among at least 16 inactive hazardous waste sites at KAFB with moderate to high potential for contaminant migration into surface or ground waters. These include six former landfills, three chemical or oil disposal pits, three sludge spreading areas, three spill areas and a used chemical storage area. The report recommends additional physical investigations at these sites to determine if there is contaminant migration and what corrective measures may be necessary. Latest word from Air Force on status of follow-up investigations is that field work and drilling are scheduled to begin this month (September), and the report (IRP Phase II) on findings and conclusions will not be completed before late FY 1985.

Texas is also considering legal action against KAFB for violation of RCRA and the Texas Solid Waste Act by failing to list all facilities used to store hazardous wastes in their "Part A" application for an interim status permit. The facilities not listed are part of the old domestic waste treatment plant and a waste "oil" pit.

## 2. TINKER AIR FORCE BASE, OKLAHOMA

### Problem Media - Water and Hazardous Waste

a. Water problem - TAFB (1) has been violating their major industrial permit ever since it was issued in November of 1974, (2) is six years past the statutory deadline for achieving BPT, and (3) has not yet fully achieved BPT. We have met and corresponded with TAFB and other Air Force representatives to discuss the TAFB needs and corrective measures and to try to accelerate accomplishment of needed improvements and compliance achievement. We recently negotiated a Federal Facility Compliance Agreement with TAFB which calls for achievement of compliance by May 1984 with limitations included in a new permit recently issued. A major improvement project began construction in March 1982 on additional capability designed to ultimately provide "BAT equivalent" treatment. The Base also implemented some in-house process and operations changes which have resulted in a marked improvement shown in recent DMRs submitted by TAFB. In July 1980 the TAFB plant was out of compliance on a total of six pollutants. As of the end of December 1982, the plant was consistently showing compliance with the limits for all but two pollutants monitored (hexavalent chromium and phenols). The magnitude of the excursions for these two had also been reduced significantly. Unusually high phenol discharges reported in March precipitated an enforcement conference with TAFB on April 29, 1983, to prompt correction of the phenol violations. TAFB agreed to immediate implementation of temporary measures to control and treat phenolic waste loads on the IWTP and to bring phenol levels in the plant discharges into compliance with permit limits in the interim prior to the "BAT" treatment improvements becoming operable. The control measures were not implemented until May, and phenol levels reported in June were within permit limits.

b. Hazardous waste problem - An Air Force report on initial investigations into past hazardous waste disposal practices indicates that TAFB has several disposal sites with moderate to high potential for migration of contaminants into surface or ground waters. Five former landfills and two abandoned industrial waste pits are included among these sites. The Base has done some groundwater monitoring with test wells at one of the landfills, which reportedly indicates no measurable contaminant migration. The Air Force report recommends additional physical investigations at the questionable sites to determine the existence and magnitude of contaminant migration and required corrective measures. Air Force advised us that field work and site drilling on follow-up investigations (IRP Phase II) have only just begun, and a Phase II report is not expected to be complete before late FY 1985.

### 3. PINE BLUFF ARSENAL, ARKANSAS

#### Problem Media - Hazardous Waste

Problem description - Army identified 29 sites on the reservation where various hazardous materials have been dumped or buried through the years and a former war gas production area where the buildings remain contaminated with the production chemical residues. One of the dump sites is in the former chemical manufacturing area, which is the proposed site for a future plant to produce one of the components of a binary nerve agent. PBA now has projects under way to remove and/or contain and close in place, as appropriate, the hazardous waste at this site and for the demolition and removal of the contaminated buildings. The Army's 1986 budget contains a similar project for the other 28 identified sites. EPA and State representatives have met with PBA, Corps of Engineers and Army contractors to (1) review plans for landfills to receive soil and debris from the binary site and future production wastes, and (2) to provide guidance for a RCRA permit application for the landfills. PBA's application for RCRA interim status for hazardous waste disposal included the problem sites as well as the new landfill and other disposal activities to be continued. A final RCRA permit is also nearing issue, and closure and post closure plans for all the sites are to follow. A recent EPA RCRA inspection identified 6 sites which are definite hazards and 17 sites potentially hazardous to surface or ground water. These include the same sites identified by the Army and programmed for correction.

### 4. FORT POLK, LOUISIANA

#### Problem Media - Water

Problem description - Fort Polk's problems are connected with sewage treatment and disposal and frequently reoccurring breaks in a major sewage force main. They have been working under an EPA Administrative Order for over 3 years to make corrections necessary to bring their expanded South Fork Polk Sewage Treatment Plant into compliance with their NPDES permit. The South Plant serves the main post of the installation and is able to demonstrate acceptable compliance with all permit limits except TSS. They are looking into ways to resolve this additional problem.

Fort Polk's ultimate sewage disposal plan is to land treat the total STP discharge and eliminate effluent discharge to Bundicks Creek. In what was supposed to be the final phase of their plan, they constructed a group of "rapid infiltration" basins in another drainage area to provide land disposal of the STP effluent. These basins were able to infiltrate only about one-third of their design capacity, and their operation was suspended shortly after they were put into operation in 1981. The Army investigated alternative disposal plans to make best use of the basins and eventually proposed a plan to use them as holding or polishing ponds for the STP effluent. Ponds effluent is to receive additional land treatment by overland flow through heavily-vegetated drainage swales or "baygalls" leading to Drake's Creek. Fort Polk, working closely with the State and EPA, is ready to begin construction on the land treatment system and has been issued a short-term interim NPDES permit to cover an 18-months trial period, during which they will conduct extensive monitoring to establish a relationship between quality in the STP and ponds effluents and D.O., nutrients and quality in Drake's Creek.

Fort Polk also has a sewage force main which has broken nine times in the first three years of operation. They have been trying to correct the problem without replacing all or a large portion of the main. The Army has also tested pipe samples to determine if the problem may be due to faulty material. Their most recent attempt at correcting the problem was to install slow acting check valves near the lift station to relieve sudden pressure surges. These valves did not correct the problem, and the latest break will precipitate another Administrative Order for positive and timely correction.

5. LOUISIANA ARMY AMMUNITION PLANT, LOUISIANA

Problem Media - Hazardous Waste

Problem description - Shallow underground water contamination is resulting from LAPP's past practices of hazardous industrial wastes disposal. Initial Army investigations in 1979 showed evidence that 17 unlined wastewater ponds containing wastes from ammunition production (16 TNT "pink water" ponds), metal finishing/cleaning and paint stripping operations and two inactive landfills on-site are leaching contaminants such as hydrogen sulfide, TNT, DNT, RDX, Tetryl and lead into the shallow water aquifer under the Plant site. The Army reported their findings in a May 1980 meeting with interested Federal and State agencies and outlined plans for additional investigations to determine the extent of migration of the contaminants and the potential threat to private water supply wells also utilizing the shallow aquifer. Additional wells have been drilled and tested to determine contaminant migration beyond the LAAP boundary and/or the extent of the migration on-post and whether it is continuing. We have just received an Army report on the latter investigations which reports that there is no apparent migration off post but some movement within the plant boundary. The report contains recommendations for corrective measures.

EPA's Solid and Hazardous Waste Research Division (SHWRD) at the Cincinnati MERL is presently working with the Army at LAAP on a remedial action research effort designed to demonstrate the effectiveness of a sludge treatment technique on the closure of one of the LAAP industrial waste ponds which could be applied to other similar lagoons and ponds. The demonstration project will be conducted under controlled operational conditions on the M-4 Lagoon (waste-water and sludge from a former cadmium electroplating operation) and will be designed to integrate with remedial and ponds closure work at LAAP's TNT pink water ponds and other Army research at similar lagoons elsewhere. The M-4 Lagoon closure-demonstration project is being closely coordinated by SHWRD and LAAP with the Louisiana DNR and EPA regional offices.

6. AIR FORCE PLANT NO. 4, TEXAS

Problem Media - Hazardous Waste

Problem description - In October 1982, Air Force discovered an oily leachate from an abandoned waste oil pit entering storm drainage eventually leading to Lake Worth, a source of water supply for the cities of Fort Worth and White Settlement. Air Force installed a temporary facility to contain, collect and dispose of the leachate and initiated further investigations into this and other abandoned waste sites to determine if contaminants were migrating into surface

or ground water. Initial investigations indicated soil and upper groundwater contamination at several waste pits and other waste sites at the AFP, and the possibility that groundwater contamination may have migrated beyond the AFP boundary and is a threat to nearby municipal and domestic water supply wells and to Lake Worth. Air Force is conducting additional ground water investigations and is also removing contaminated earth from sites where migration is indicated. EPA Superfund program is assisting Air Force with offsite groundwater investigations and problem correction. Results of EPA off-site sampling are not yet in, and offsite migration is still in question.

## 7. LONGHORN ARMY AMMUNITION PLANT, TEXAS

### Problem Media - Hazardous Waste

Problem description - LAAP has three potential problem hazardous waste sites. One is a 23-acre former manufacturing area where TNT was manufactured during WWII and where the soil may be contaminated by "red water" residue subject to being carried by rainwater runoff or percolation into surface or ground waters. The other potential problem sites are (1) an unlined evaporation pond receiving washdown water from propellant loading operations and (2) an abandoned landfill in which wastes from the former TNT plant were buried. The Army installed 22 monitoring wells around the latter two sites, and subsequent monitoring indicated a contaminant migration problem at the evaporation pond and a potential nitrate migration problem at the landfill. Additional samples were taken at the landfill, but information on the results hasn't been received yet by EPA. Current plans are to install a treatment plant for the propellant loading area waste water and close the pond. A study to characterize waste quality and volume going to the pond is under way, and the study results are to be used to determine future waste treatment processes and a method of closure for the pond. A study report has been completed and is the basis for design of new treatment facilities currently in the planning stage. The Army has completed the second or monitoring phase of its Installation Restoration Program (IRP) investigations into all these potential problem areas, but the Phase II report on findings and correction recommendations has not yet been received by EPA.

LAAP is also one of the potential sources of contaminants (PCBs, lead, cadmium, etc.) found recently in Caddo Lake during investigations conducted in connection with Section 404 dredging permit applications to the Corps of Engineers. As a result, EPA has notified the Army of our special interest in the results of their hazardous waste disposal investigations at LAAP. They have promised to expedite our receipt of their monitoring results to aid in the Caddo Lake study.

## 8. AIR FORCE PLANT NO. 83, NEW MEXICO

### Problem Media - Hazardous Waste

Problem description - Recent EPA inspections at this plant (AFP) have identified several problems with storage and handling of chemical waste materials. These problems have resulted in the discharge of hazardous wastes into surface drainage going into the San Jose Drain to the Rio Grande River, and there is a strong possibility they may also be contributing to contamination of an underground water supply source for the City of Albuquerque. The city's San Jose Well No. 6, and a nearby industrial water well, both located within a half mile of the AFP, were found to be contaminated with several suspected carcinogenic chemicals, including trichloroethylene and dichloroethylene. These solvents

are, or have been, used in the AFP processes. State data from the S. Valley investigations indicates the AFP is a potential contributor to the groundwater contamination. EPA and Air Force are conducting separate investigations to confirm contaminant contribution and identify contamination sources. On-site investigations are being done under an IRP Phase II project by the Air Force, and an EPA contractor will perform off-site investigations.

The AFP has completed correction of deficiencies in hazardous waste handling and storage cited by an EPA RCRA Compliance Order, and the Order has been closed out. However, EPA has called in the Part B application for a RCRA permit from the AFP, and to date a complete application has not been received.

9. MCALISTER ARMY AMMUNITION PLANT, OKLAHOMA

Problem Media - Water and Hazardous Waste

a. Water Problem - Recent inspection visits to MAAP identified some potential intermittent wastewater discharges not currently included in the NPDES permit. MAAP has since made application to EPA for permit modification to include these discharges, and the revised permit will be issued in late September, 1983.

b. Hazardous Waste Problem - This plant has several lagoons receiving industrial wastes from their ammunition production facilities. There is a possibility that various contaminants, including TNT and heavy metals, may be migrating from these lagoons through the soil into ground or surface waters. In cooperation with the State of Oklahoma, the Army installed 11 test wells around the lagoons and has been analyzing samples for about a year. Results of analyses indicate some migration, but monitoring wells arrangement does not allow for identification of problem ponds. Army sent a geologist to MAAP in September 1982 to evaluate the monitoring program and recommend improvements needed to determine where migrations are originating and corrections are needed. His evaluation report calls for additional wells and testing before a definite determination can be made. It was originally thought that these ponds are all active disposal ponds subject to RCRA permitting and regulation rather than to CERCLA or Superfund cleanup procedures. However, we have determined that some of the lagoons are part of the industrial waste treatment facilities covered under the NPDES permit, and not subject to RCRA permitting. Regardless of the applicable permit program, investigations into potential or actual groundwater contamination will continue, to determine the need for corrective measures.

10. KIRTLAND AIR FORCE BASE, NEW MEXICO

Problem Media - Hazardous Waste

Problem description - Air Force initial investigations into past hazardous waste disposal practices and waste disposal sites at KAFB indicate KAFB has six inactive sites with moderate to high potential for contaminant migration into surface or ground waters. These include four former landfills, a radioactive waste burial site and the main Base Fire Training Area. The investigation report recommends additional soil and leachate investigations at each site to determine the existence and magnitude of contaminant migration and necessary corrective measures. Phase II (IRP) investigations are now underway to determine

the existence and/or extent of contaminant migration, and the Phase II report is expected to be ready about June 1984. KAFB is an especially sensitive facility because of its potential connection to Albuquerque's S. Valley ground water pollution problem. Investigations to date into that problem have not implicated KAFB as a contributor.

#### 11. MCGREGOR NAVAL INDUSTRIAL WEAPONS PLANT, TEXAS

##### Problem Media - Hazardous Waste

Problem description - Navy investigations into past hazardous waste disposal practices at the McGregor plant identified two potential problem sites requiring further investigation to determine the extent of the problems and appropriate corrective measures. The two sites are inactive and involve deposits of asbestos and DDT. The latter deposits were left by a private firm formerly leasing a part of the plant's production facilities to produce DDT. The Navy has coordinated preliminary and final cleanup and closure plans with EPA and Texas, and received State approval of closure plans in June 1983. On-site cleanup and closure work is scheduled to begin in the spring of 1984 and be completed in September 1984.

#### 12. RED RIVER ARMY DEPOT, TEXAS

##### Problem Media - Hazardous Waste

Problem description - Initial results from RRAD's groundwater monitoring system, installed in response to RCRA regulations, indicate apparent migration of contaminants from two areas of the installation where hazardous wastes are or were being deposited. The OTC (Ordinance Training Center) area contains three former burial sites, and the IWTP (Industrial Waste Treatment Plant) area contains two active industrial waste treatment ponds. RRAD met with Texas RCRA program representatives in Austin in June 1982, and presented their monitoring results in an Army Groundwater Assessment Report, which included recommendations for corrective measures, if deemed necessary. This meeting resulted in a mutual decision to postpone corrective measures and install additional monitoring wells to confirm whether corrective measures are necessary. RRAD obtained approval of the revised monitoring plan from the Texas Department of Health and implemented the additional monitoring required. Analytical results of the sampling have not yet been given to the State agency.

#### 13. LOS ALAMOS NATIONAL LABORATORY, NEW MEXICO

##### Problem Media - Water

Problem description - LANL has a single NPDES permit covering a total of 110 industrial and domestic waste discharges, most of which are minor low pollution potential discharges. Recent monitoring data received from LANL indicate all but six of the covered discharges are generally complying with the permit limitations.



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Two of these non-compliant discharges are covered by a Federal Facility Compliance Agreement (FFCA) EPA concluded with DOD, and correction projects are underway on them. Compliance attainment is scheduled by September 1985. Problems with the other four discharges surfaced after the FFCA was finalized, and we have had both written and telephone communication with LANL about correction. LANL reports they are evaluating available alternative correction measures and will initiate corrective actions as soon as the choices are made.

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